



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/774,047 01/31/01 FURUKAWA

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022850 MM91/1015
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EXAMINER

BUDD, M

ART UNIT

PAPER NUMBER

2834

DATE MAILED:

10/15/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

774047

Applicant(s)

Forukawa et al

Examiner

M. B. S. J.

Group Art Unit

2834

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 166-171 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 166-171 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some* ☐ None of the:

- ☒ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____

☐ Copies of the certified copies of the priority documents have been received
in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 3(8-24-01) ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 166-169 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no written description or illustration of a device where the pad is thicker than the board wiring pattern, or of a substrate with a recessed center portion.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 166 rejected under 35 U.S.C. 102(a) as being clearly anticipated by Japan (340) (fig. 1&2) or Nishio (figs. 1, 2&4).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 167 rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (340) or Nishio.

Japan (340) and Nishio teach the claimed structure except for the specific dimensions. However, optimizing a known device, (e.g. thru routine trial and error or experiment action) has long been held to be within the skill expected of the routineer. Therefore selection of optimal dimensions for Japan (340) or Nishio would have been obvious to one of ordinary skill in the art.

Claims 168 and 169 rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (878) or Japan (758).

Japan (878) (fig. 1) and Japan (758) (figs. 1-8) each teach the claimed SAW device and mounting structure except for the use of an acoustic absorber. However, it is well known per se to place an acoustic absorber between the substrate edge and the transducer fingers to prevent reflected waves from interfering with the operation of the device. (Official Notice taken). Thus, for its known function, it would have been obvious to one of ordinary skill in the art to provide appropriate acoustic absorbers on Japan (758) or Japan (878).

Claim 170 and 171 rejected under 35 U.S.C. 103(a) as being unpatentable over Yatsuda, Onishi or Tsuji.


Each of Yatsuda, Onishi and Tsuji teach the claimed structure except for the inclusion of an acoustic absorber and don't explicitly show stacked conductive bumps. However, making parts integral or separable has long been held to be within the skill expected of the routineer. Thus, to use plural stacked bumps in lieu of one large bump in Yatsuda would have been obvious

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to one of ordinary skill in the art. Also, it has long been held to be within the skill expected of the routineer to select from among known suitable materials. Thus it would have been obvious to one of ordinary skill in the art that each layer in Onishi (#104, #105) or Tsuji (#11, #12) could have been a conductive bump.

Budd/nt

10/11/01


J. BUDD
PRIMARY EXAMINER
ART UNIT 212